

Appendix A: marked up version showing the changes made in the specification

In the Specification:

A polypeptide was predicted to be encoded by SEQ ID NO: 2 as set forth below. The polypeptide was predicted using a software program called FASTY (available from the Internet website at: fasta.bioch.virginia.edu [<http://fasta.bioch.virginia.edu>]) which selects a polypeptide based on a comparison of translated novel polynucleotide to known polypeptides (W.R. Pearson, Methods in Enzymology, 183: 63-98 (1990), herein incorporated by reference).

Applicant: Boyle, et al. [REDACTED]
U.S. Application No. 09/676,135

Appendix C – Clustal W Analysis

Appendix C-Clustal W

Alignment Report of Align_Carboxypeptidase.meg ClustalW (Slow/Accurate, Gonnet)
 Sunday, July 28, 2002 1:04 PM

Page 1

1	- - - - -	M K P L L E T L Y L L	00002227Fa161_aa1
1	- - - - -	- - - - -	21489916_CPO
1	- - M L A F L I L V T V T	L A S A H H S	CAB46991
1	M K L H G L G I L V A I I	I L Y E Q H - -	gi7416967_Mouse_TAFI
1	M K L H G L G I L V A I I	I L Y E Q H - -	BAB03402_Mouse
12	G M L V P G G	- - - - - L	00002227Fa161_aa1
1	- - - - -	- - - - -	21489916_CPO
19	G E H F E G E	K V F R V N V E D E N D I	CAB46991
19	G F A F Q S G	Q V L S A L P R T S R Q V	gi7416967_Mouse_TAFI
19	G F A F Q S G	Q V L S A L P R T S R Q V	BAB03402_Mouse
20	G Y D R S L A Q H R Q E I V D K S V S P	00002227Fa161_aa1	
1	- - - S L A Q H R Q E I V D K S V S P	21489916_CPO	
39	S L L H E L A S T R Q I D F W K P D S V	CAB46991	
39	Q L L Q N L T T T Y E V V L W Q P V T A	gi7416967_Mouse_TAFI	
39	Q L L Q N L T T T Y E V V L W Q P V T A	BAB03402_Mouse	
40	W S L E T Y S	- - - - -	00002227Fa161_aa1
17	W S L E T Y S	- - - - -	21489916_CPO
59	T Q I K P H S T V D F R V K A E D I L A	CAB46991	
59	E F I E K K K E V H F F V N A S D V D S	gi7416967_Mouse_TAFI	
59	E F I E K K K E V H F F V N A S D V D S	BAB03402_Mouse	
47	- - - - -	- - - - -	00002227Fa161_aa1
24	- - - - -	- - - - -	21489916_CPO
79	V E D F L E Q N E L Q Y E V L I N N L R	CAB46991	
79	V K A H L N V S R I P F N V L M N N V E	gi7416967_Mouse_TAFI	
79	V K A H L N V S R I P F N V L M N N V E	BAB03402_Mouse	
47	- - - - -	Y N	00002227Fa161_aa1
24	- - - - -	Y N	21489916_CPO
99	S V L E A Q - F D S R V - - R T T G H S	CAB46991	
99	D L I E Q Q T F N D T V S P R A S A S Y	gi7416967_Mouse_TAFI	
99	D L I E Q Q T F N D T V S P R A S A S Y	BAB03402_Mouse	
49	- - I Y H P M G E I Y E W M R E I S E K	00002227Fa161_aa1	
26	- - I Y H P M G E I Y E W M R E I S E K	21489916_CPO	
116	Y E K Y N N W E T I E A W T K Q V T S E	CAB46991	
119	Y E Q Y H S L N E I Y S W I E V I T E Q	gi7416967_Mouse_TAFI	
119	Y E Q Y H S L N E I Y S W I E V I T E Q	BAB03402_Mouse	

67	Y K E V V T Q H F L G V T Y E T H P I Y	00002227Fa161_aa1
44	Y K E V V T Q H F L G V T Y E T H P M Y	21489916_CPO
136	N P D L I S R T A I G T T F L G N N I Y	CAB46991
139	H P D M L Q K I Y I G S S F E K Y P L Y	gi7416967_Mouse_TAFI
139	H P D M L Q K I Y I G S S F E K Y P L Y	BAB03402_Mouse
87	Y L K I S Q P S G N P K K I I W M D C G	00002227Fa161_aa1
64	Y L K I S Q P S G N P K K I I W M D C G	21489916_CPO
156	L L K V - G K P G P N K P A I F M D C G	CAB46991
159	V L K V S G K E Q R I K N A I W I D C G	gi7416967_Mouse_TAFI
159	V L K V S G K E Q R I K N A I W I D C G	BAB03402_Mouse
107	I H A R E W I A P A F C Q W F V K E I L	00002227Fa161_aa1
84	I H A R E W I A P A F C Q W F V K E I L	21489916_CPO
175	F H A R E W I S H A F C Q W F V R E A V	CAB46991
179	I H A R E W I S P A F C L W F I G Y V T	gi7416967_Mouse_TAFI
179	I H A R E W I S P A F C L W F I G Y V T	BAB03402_Mouse
127	Q N H K D N S R I R K L L R N L D F Y V	00002227Fa161_aa1
104	Q N H K D N S S I R K L L R N L D F Y V	21489916_CPO
195	L T Y G Y E S H M T E F L N K L D F Y V	CAB46991
199	Q F H G K E N L Y T R L L R H V D F Y I	gi7416967_Mouse_TAFI
199	Q F H G K E N L Y T R L L R H V D F Y I	BAB03402_Mouse
147	L P V L N I D G Y I Y T W T T D R L W R	00002227Fa161_aa1
124	L P V L N I D G Y I Y T W T T D R L W R	21489916_CPO
215	L P V L N I D G Y I Y T W T K N R M W R	CAB46991
219	M P V M N V D G Y D Y T W K K N R M W R	gi7416967_Mouse_TAFI
219	M P V M N V D G Y D Y T W K K N R M W R	BAB03402_Mouse
167	K S R S P H N N G T C F G T D L N R N F	00002227Fa161_aa1
144	K S R S P H N N G T C F G T D L N R N F	21489916_CPO
235	K T R S T N A G T T C I G T D P N R N F	CAB46991
239	K N R S A H K N N R C V G T D L N R N F	gi7416967_Mouse_TAFI
239	K N R S A H K N N R C V G T D L N R N F	BAB03402_Mouse
187	N A S - W C S I G A S R N C Q D Q T F C	00002227Fa161_aa1
164	N A S - W C S I G A S R N C Q D Q T F C	21489916_CPO
255	D A G - W C T T G A S T D P C D E T Y C	CAB46991
259	A S K H W C E K G A S S S S C S E T Y C	gi7416967_Mouse_TAFI
259	A S K H W C E K G A S S S S C S E T Y C	BAB03402_Mouse

206	G T G P V S E P E T K A V A S F I E S K	00002227Fa161_aa1
183	G T G P V S E P E T K A V A S F I E S K	21489916_CPO
274	G S A A E S E K E T K A L A D F I R N N	CAB46991
279	G L Y P E S E P E V K A V A D F L R R N	gi7416967_Mouse_TAFI
279	G L Y P E S E P E V K A V A D F L R R N	BAB03402_Mouse
	* * *	
226	K D D I L C F L T M H S Y G Q L I L T P	00002227Fa161_aa1
203	K D D I L C F L T M H S Y G Q L I L T P	21489916_CPO
294	L S S I K A Y L T I H S Y S Q M I L Y P	CAB46991
299	I D H I K A Y I S M H S Y S Q Q I L F P	gi7416967_Mouse_TAFI
299	I D H I K A Y I S M H S Y S Q Q I L F P	BAB03402_Mouse
	* * *	
246	Y G Y T K N K S S N H P E M I Q V G Q K	00002227Fa161_aa1
223	Y G Y T K N K S S N H P E M I Q V G Q K	21489916_CPO
314	Y S Y D Y K L P E N N A E L N N L A K A	CAB46991
319	Y S Y N R S K S K D H E E L S L V A S E	gi7416967_Mouse_TAFI
319	Y S Y N R S K S K D H E E L S L V A S E	BAB03402_Mouse
	* * *	
266	A A N A L K A K Y G - T N Y R V G S S A	00002227Fa161_aa1
243	A A N A L K A K Y G - T N Y R V G S S A	21489916_CPO
334	A V K E L A L T L Y G - T K Y T Y G P G A	CAB46991
339	A V R A I E S I N K N T R Y T H G S G S	gi7416967_Mouse_TAFI
339	A V R A I E S I N K N T R Y T H G S G S	BAB03402_Mouse
	* * *	
285	D I L Y A S S G S S R D W A R D I G I P	00002227Fa161_aa1
262	D I L Y A S S G S S R D W A R D I G I P	21489916_CPO
353	T T I Y P A A G G G S D D W A Y D Q G I K	CAB46991
359	E S L Y L A P G G S D D W I Y D L G I K	gi7416967_Mouse_TAFI
359	E S L Y L A P G G S D D W I Y D L G I K	BAB03402_Mouse
	* * *	
305	F S Y T F E L R D S G T Y G F V L P E A	00002227Fa161_aa1
282	F S Y T F E L R D S G T Y G F V L P E A	21489916_CPO
373	Y S F T F E L R D K G R Y G F I L P E S	CAB46991
379	Y S F T I E L R D T G R Y G F L L P E R	gi7416967_Mouse_TAFI
379	Y S F T I E L R D T G R Y G F L L P E R	BAB03402_Mouse
	* * *	
325	Q I Q P T C E E T M E A V L S V L D D V	00002227Fa161_aa1
302	Q I Q P T C E E T M E A V L S V L D D V	21489916_CPO
393	Q I Q A T C E E T M L A I K Y V T N Y V	CAB46991
399	Y I K P T C A E A L A A I S K I V W H V	gi7416967_Mouse_TAFI
399	Y I K P T C A E A L A A I S K I V W H V	BAB03402_Mouse

345	Y A K H W H S D S A G R V T S A T M L L	00002227Fa161_aa1
322	Y A K H W H S D S A G R V T S A T M L L	21489916_CPO
413	L G H L	CAB46991
419	I R N T	gi7416967_Mouse_TAFI
419	I R N T	BAB03402_Mouse
365	G L L V S C M S L L	00002227Fa161_aa1
342	G L L V S C M S L L	21489916_CPO
416		CAB46991
422		gi7416967_Mouse_TAFI
422		BAB03402_Mouse

Decoration 'Decoration #1': Box residues that match
00002227Fa161_aa1 exactly.

KEY

For convenience, all numbering refers to the numbering of 00002227Fa161_aa1.

Bolded Residues (Y50 through E332) = Zinc carboxypeptidase Pfam signature (PF00246).

Barred Residues (K99 through F121) = Residues below the bar comprise a PROSITE Carboxypept_Zn_1 signature (PS00132)
PS00132 signature = [PK]-x-[LIVMFY]-x-[LIVMFY]-x(4)-H-[STAG]-x-E-x-[LIVM]-[STAG]-x(6)- [LIVMFYTA]
(<http://www.expasy.ch/prosite>).

Asterisks (*) = Residues indicated by an asterisk are those involved in the coordination of the active site zinc atom and are highly conserved amongst members of the CPA/B carboxypeptidase subfamily.
(JBC 2002; 277 pp. 14954-64)

Dots (.) = Residues indicated by a dot are those that are important for substrate binding and catalysis and are highly conserved amongst members of the CPA/B carboxypeptidase subfamily.
(JBC 2002; 277 pp. 14954-64)